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Title Slide: Fast Response Survey System (FRSS)

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This module introduces users to the Fast Response Survey System (or FRSS). The module highlights past survey topics, describes the survey design and sampling frame, explains how data were collected and processed, and explains how FRSS data are weighted and the imputation process used for missing data. It also explains the survey estimation and limitations as well as the comparability of questions across multiple FRSS surveys. Along with describing the downloadable data files and documentation that are available, this module includes an explanation of how to interpret the record layout. The module also provides answers to frequently asked questions, and explains the publications that are associated with FRSS data.

Throughout the module, you will be able to access the various resources described by clicking the underlined screen text on each slide.

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The Fast Response Survey System (or FRSS) was established in 1975 to collect issue-oriented data quickly and with minimum response burden.

As nationally representative surveys, the FRSS was designed to meet the data needs of Department of Education analysts, planners, and decision-makers, as well as other government officials with education data needs. FRSS surveys are designed to collect issue-oriented data at the elementary and secondary levels within a relatively short time frame. Generally, each survey is limited to three pages of questions and has a response burden of about 30-45 minutes per respondent.

Findings from FRSS surveys have been included in congressional reports, testimony to congressional subcommittees, NCES reports, and other Department of Education reports. The findings are also often used by state and local education officials.

To date, over 100 surveys have been conducted under the FRSS.

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This table shows the available FRSS datasets by year administered. To scroll through the table, click the Pause button at the bottom of the screen.

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FRSS surveys are representative at the national level, drawing from a universe that is appropriate for each study. The FRSS collects data from state education agencies, national samples of other educational organizations including local education agencies, private and public elementary and secondary schools, teachers, and principals, and public and private school libraries. The sample sizes are relatively small, usually about 1,200 to 1,800 respondents.

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The sampling frame for FRSS is typically the NCES Common Core of Data (or CCD) or the Private School Universe Survey (or PSS).

Variables that are usually used for stratification or sorting within the primary strata include instructional level (elementary, middle, and secondary/combined schools), categories of enrollment size, community type (city, suburban, town, and rural), geographic region, (Northeast, Southeast, Central, and West), and categories of poverty status (based on eligibility for free or reduced-price lunch).

Teacher surveys generally use a two-stage sampling process.

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As a sampling frame example, the sample for "Public School Safety and Discipline: 2013–14" consisted of approximately 1,600 schools selected from the 2011–12 NCES Common Core of Data (or CCD) Public School Universe file, which was the most current file available at the time of selection. This survey was designed to provide national estimates on public school safety and discipline for the 2013–14 schoolyear. The sampling frame was over 50,000 regular elementary schools, over 16,000 regular middle schools, and over 19,000 regular high school/combined schools. For the purpose of this study, “regular” schools included charter schools.

Schools that were excluded from the sampling frame include schools with a high grade of prekindergarten or kindergarten, or ungraded schools, schools with zero, missing, or “not applicable” enrollment, along with special education, vocational, and alternative/other schools, and schools outside the 50 states and the District of Columbia.

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The public school sampling frame was stratified by instructional level (elementary, middle, and high school/combined), community type (city, suburban, town, and rural), and enrollment size (less than 300, 300 to 499, 500 to 999, and 1,000 or more) to create 45 primary strata. Within each stratum, schools were sorted by region (Northeast, Midwest, South, and West) and percent White non-Hispanic enrollment in the school (where data indicated missing, 96 percent or more, 81 to 95 percent, 51 to 80 percent, and 50 percent or less) prior to selection to induce additional implicit stratification.

Within each primary stratum, schools were selected systematically using sampling rates that depended on the size classification of the school.

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To collect data, the self-administered questionnaires are mailed to the schools. Respondents can complete the questionnaire either on paper or online. Telephone follow-ups are used and serve two purposes. First, a follow-up telephone call is used for any school that did not respond to the survey. Second, a telephone follow-up is

used to clarify data that may be unclear on a survey that was completed. Although the surveys are designed to account for sampling error and to minimize nonsampling error, estimates produced from the data collected are subject to both types of error.

All FRSS questionnaires are pretested. They are also checked for consistency in interpretation of questions and to eliminate ambiguous items before fielding to all institutions in the sample.

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As an example of the data collection process, questionnaires and cover letters for the "Public School Safety and Discipline: 2013-14" survey were mailed to the principal of each sampled school in February 2014. The letter stated the purpose of the study and requested that the questionnaire be completed by the person most knowledgeable about safety and discipline at the school. Respondents were offered options of completing the survey on paper or online. Telephone follow-up for survey nonresponse and data clarification was initiated in March 2014 and completed in July 2014.

Twenty-five of the approximately 1,600 public schools in the sample were found to be ineligible because the school was closed or did not meet some other criteria for inclusion in the sample (e.g., was an alternative school).

For the eligible schools, an unweighted response rate of 86 percent was obtained for this survey (about 1,350 responding schools divided by the approximately 1,575 eligible schools in the sample). The corresponding weighted response rate using the initial base weights was 85 percent.

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FRSS response data are weighted to produce national estimates. The weights are designed to adjust for the variable probabilities of selection and differential nonresponse. Out-of-scope units are deleted from the initial sample before weighting and analysis.

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As an example, for the "Public School Safety and Discipline: 2013-14" survey, weights were used to produce national estimates and were designed to reflect the variable probabilities of selection of the sampled schools and teachers. They were also adjusted for differential unit nonresponse associated with the questionnaire.

The nonresponse weighting adjustments were made within classes defined by instructional level, community type, and enrollment size.

Within the final weighting classes, the base weights (i.e., the reciprocal of schools' probabilities of selection) of the responding schools were inflated by the inverse of the weighted response rate for the class.

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Because item nonresponse in FRSS surveys is typically very low, the use of imputation is limited. Missing data are imputed for the items with a response rate of less than 100 percent using a “hot-deck” approach to obtain a “donor” from which the imputed values are derived. Once a donor is found, it is used to derive the imputed values for the missing data. For categorical items, the imputed value is the corresponding value from the donor. For numerical items, an appropriate ratio (e.g., the proportion of instructional rooms with wireless internet connections) is calculated for the donor, and this ratio is applied to available data (e.g., reported number of instructional rooms) for the recipient to obtain the corresponding imputed value. All missing items for a recipient are imputed from the same donor.

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As an example, cases with missing data from the “Public School Safety and Discipline: 2013-14” survey were re-contacted by telephone to collect the missing information. However, for cases in which this data retrieval was unsuccessful, missing data were imputed. Although item nonresponse was very low (less than 1 percent for any item), missing data were imputed for the 6 items with a response rate of less than 100 percent.

The missing items included both numerical data (e.g., the number of violent incidents that occurred at school), as well as categorical data, (e.g., whether the school had a particular safety practice).

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The missing data were imputed using a “hot-deck” approach to obtain a “donor” school from which the imputed values were derived. Under the “hot-deck” approach, a donor school that matched selected characteristics of the school with missing data (the recipient school) was identified. The matching characteristics included instructional level, enrollment size, community type, region, and percent White non-Hispanic enrollment in the school. In addition, other relevant questionnaire items were used to form appropriate imputation groupings. Once a donor was found, the imputed value was the corresponding value from the donor school. Imputation flags are included in the data.

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The sample size permits limited breakouts by analysis variables. As the number of categories within any single analysis variable increases, the sample size within categories decreases, which results in larger sampling errors.

FRSS survey data are based on complex sample designs that require the use of weights to compensate for variable probabilities of selection, differential response rates, and possible deficiencies in the sampling frame.

For information on properly analyzing NCES complex sample data, please review the two Distance Learning Dataset Training (or DLDT) common modules “Analyzing NCES Complex Survey Data” and “Statistical Analysis of NCES Datasets Employing a Complex Sample Design” by clicking on the underlined screen text.

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Although most questions on repeated surveys ask for similar information, the wording or organization of some questions differs to the extent that direct comparisons are not possible. These changes in question wording can be necessary to allow for more detailed information or to capture changes from years past. Some questionnaire items may contain limitations or wording problems that require modifications. And, new topics result in some of the older items being dropped because of space limitations.

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FRSS Public-use data files and documentation are available on the NCES website. There are three types of files available including ASCII flat files, SAS files, and other documentation such as technical notes, the questionnaires, file layout, and summary statistics for variables in the data files.

Flat files are ASCII text files that contain no formatting and have no column headers; however, they are convenient to use with statistical processing programs.

SAS files are formatted for analysis in SAS data analysis software; the readme.txt file in the documentation for each survey describes the function of the various SAS files.

Note that NCES does all it can to assure that the identity of data subjects cannot be disclosed. All direct identifiers, as well as any characteristics that might lead to identification, are omitted or modified in the dataset to protect the true characteristics of individual cases. Due to confidentiality legislation, you will need to obtain (or amend) an NCES Restricted-use data license if you want to access more finely grained micro-data data from some surveys.

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For each variable, the record layout provides important information. The first column of the record layout file contains the variable name (e.g., S_Level). The second column indicates the type of variable (e.g., C H A R for character, or N U M for numeric). The third column of the record layout lists the column(s) associated with the variable in the survey dataset. And finally, the “Description” column provides a short explanation of the variable.

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The following slides will provide several “frequently asked questions” from FRSS users and the corresponding answers to help users understand what is available and what is beyond the scope of the FRSS.

How can I access the survey data? To access FRSS survey data, go to the Downloads page. If a dataset is available for public use, it can be downloaded directly from this website. Beyond the public-use datasets currently listed, though, public-use datasets from additional surveys may be forthcoming. Please contact the helpdesk at FRSS@ed.gov for information on when new datasets are expected to be available. If you need restricted-use data, a Restricted-use license will be required.

Will a survey on a certain topic be administered again in future years? Most FRSS surveys are only administered once. Some surveys, like surveys on distance education, remedial education, Internet access, and teacher preparation and qualifications, though, have been conducted more than once in the past, but may or may not be conducted again in the future. You may contact the helpdesk at FRSS@ed.gov to find out if a survey on a particular topic is planned.

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Can I have analyses run for me? No, analyses are not provided by NCES. However, if the data are available on the Downloads page, you may obtain the data you wish to analyze.

Is it possible to have data tables computed online for FRSS surveys? No, not at this time.

Why do the poverty categories (e.g., less than 11 percent) vary across different FRSS publications? The old poverty categories were based on empirically derived quartiles. However, a decision was made recently within NCES to adjust the categories to match those used for Title I.

Who is represented in the survey samples? All FRSS survey results are based on nationally representative samples, as opposed to samples that are drawn to be representative of individual states. Therefore, state-level estimates with FRSS data are not available.

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Can I get a list of institutions that gave a particular answer to a survey item, or find out how a particular institution responded? No. When the data were collected, institutions were assured that their survey responses would remain confidential.

Can I download and use FRSS survey questionnaires? Yes. Survey questionnaires are in the public domain and may be found, when applicable, in the appendix section of the publication.

Who may request a survey? Surveys may only be requested by principal operating components of the U.S. Department of Education or agencies working on issues relevant to Department policymakers.

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First Look Reports introduce new NCES data to the public. These reports are a collection of up to 15 pages of tables, presented with a brief introduction, one page of findings, and necessary technical notes that briefly describe the sample design and data collection. The Reports contain descriptive information and include selected findings from the surveys.

The findings are chosen to demonstrate the range of information available from the study rather than to discuss all of the data collected; they are not meant to emphasize any particular issue.

Many of the variables examined in the First Look Reports are related to one another and complex interactions and relationships are not explored in these reports.

Survey questionnaires are in the public domain and may be found in the appendix section of the report.

Initial reports are released less than one year from the end of data collection.

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For questions about the FRSS, please first refer to the Frequently Asked Questions (or, FAQ) page or email the FRSS survey manager at FRSS@ed.gov.

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This module has introduced users to the Fast Response Survey System (or FRSS). The module highlighted past survey topics, described the survey design, including sample design, sampling frame, and data collection, and explained some limitations to keep in mind for analysis of FRSS data. It also described the downloadable data files and documentation that are available and explained how to interpret the record layout. The module also provided answers to frequently asked questions and described publications that are available for download.

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Important resources that have been provided throughout the module are summarized on this slide for your reference.

You may now click the exit button to return to the landing page.